

**TECHNICAL MANAGEMENT TEAM
MEETING NOTES
April 24, 2002
CORPS OF ENGINEERS NORTHWESTERN DIVISION OFFICES – CUSTOM HOUSE
PORTLAND, OREGON**

TMT Internet Homepage: <http://www.nwd-wc.usace.army.mil/TMT/index.html>

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FACILITATOR'S SUMMARY NOTES ON FUTURE ACTIONS

The following notes are a summary of issues that are intended to point out future actions or issues that may need further discussion at upcoming meetings. These notes are not intended to be the “record” of the meeting, only a reminder for TMT members.

Hanford Reach/Vernita Bar Update:

Chris Carlson reported on discharges out of Priest Rapids for April 8 – 23. 271 fish were found April 8-14 with an average length of 41.1 mm. 318 were found April 15-23, averaging 42.9 mm. Flows fluctuated due to rain and runoff. On April 19, flows were at 150 kcfs, instead of the proposed 103 kcfs, due to a misunderstanding with the operator. A correction was made quickly and communication is improving between agencies and operators. Chris was asked to include the size of the fish in his reports that are posted on the TMT web site. The fish are close to the end of emergence, which is expected late today or tomorrow, April 25.

Water Supply Forecast:

Harold Opitz reported that the water supply forecast is slightly near or above normal for the year. He presented and explained confidence intervals and the refill expectations based on them. He will send the graphs to Cindy Henriksen for distribution to TMT members.

Water Management Plan (WMP):

Idaho Fish and Game's comments to the WMP were handed out. These may be included in the Spring/Summer Update. An April 23 draft of the Update and the charts and graphs that will be included were distributed for review. TMT members expressed appreciation for the thoroughness of the Update.

Action: Cindy will email TMT members when the Update is posted on the web site. Comments will be received at later TMT meetings, either orally or in writing.

McNary Bridge Removal: The COE began removal of the bridge April 24. The work is expected to be completed May 9.

Action: The COE will email a schedule of the planned removal work to TMT members. (This was done on April 24. Thank you Cathy Hlebechuk for such a quick turnaround.)

Review Current System Conditions:

Water Supply: The Action Agencies reported on current system conditions and the group discussed the following:

Review Flow Projection Spreadsheet: Flows were high in the past two weeks due to rains and runoff. Projections show numbers coming down. The Salmon Managers expressed concern that there are a lot of fish in the river and flow is needed to support them. The Action Agencies said their strategy is to make every effort to meet the flow objectives and to try to smooth flows for the transition to freshet (expected mid-May).

Water Quality:

A new spill priority list was put out by the COE. Because of concerns with gas caps and workers in the stilling basin for McNary bridge removal work, TMT members agreed to move McNary to below Lower Granite on the spill priority list. There was also concern that by moving McNary down, John Day was bumped to the top of the list. Some members wanted to see John Day moved further down to minimize impacts on the study at the project. It was noted that the list was developed in case of emergency and “over-generation”. As such, TMT decided to list the projects in the following order until further discussion at the May 8 TMT meeting:

- The Dalles
- Bonneville
- Little Goose
- Ice Harbor
- John Day
- Lower Granite
- McNary

Dick Cassidy reported that the COE will provide graphs on spill operations, patterns and resulting gas levels that are occurring. These graphs will be available on the TMT web page. The COE is working on smoothing out flows with spill requirements for studies at John Day and Bonneville.

Fish Status: Juveniles are expected to peak in the next 2-3 weeks. Adult passage is average, although there was a big dip during high flows from April 13-20 and another has begun in the last day. It is unclear why this is occurring.

Snake River Fish Operations after May 1:

The spring spill operations discussed at the last meeting began as scheduled at each of the projects. Paul Wagner said NMFS proposes to deviate from the Biological Opinion and run Lower Monumental in a manner to collect enough fish for Ice Harbor study objectives and the transport study. Paul proposed an every other day collection and transport operation. If the transport study does not compromise the Ice Harbor study (which is in its third year), the COE and other TMT members support a variation, but want to explore the options further with NMFS and the researchers. NMFS, the COE, and AFEP will communicate and get information to TMT as soon as possible.

Oregon noted they have a problem with studies that compromise transport of migrating fish. Needs of migrating fish and research should be balanced.

Expected Sturgeon Operation in 2002:

Dave Wills reported on USFWS' finalized proposal that he presented at the April 10 TMT meeting. TMT asked how the operation will affect Libby and other projects. Dave said benefits to salmon, sturgeon and bull trout are expected with the operation. The SOR 2002-1 was accepted by TMT. June 23 is the target date for the beginning of this operation.

SOR 2002 C-3:

Kyle Martin presented CRITFC's request for stable levels within 1 foot of full at The Dalles, John Day and Bonneville pools for tribal treaty fishing. The COE will implement operations as we always have, with a priority on Bonneville while attempting to maintain levels at the other pools.

Next Meeting, May 8, 9 AM:

Agenda Items:

- Hanford Reach Update
- Water Supply Forecast
- Water Management Plan
- Spill Priority List
- McNary Bridge Construction Update
- Fish Migration Status (including chum emergence)
- Current System Status
- Snake River Fish Operations
- Updates from Idaho Power
- Recommended Operations

1. Greeting and Introductions

The April 24 Technical Management Team meeting was chaired by Cindy Henriksen of the Corps and facilitated by Donna Silverberg. The following is a distillation, not a verbatim transcript, of items discussed at the meeting and actions taken. Anyone with questions or comments about these minutes should call Henriksen at 503/808-3945.

2. Hanford Reach Update.

Chris Carlson reviewed the most recent Hanford Reach flows, beginning on April 8, when average Priest Rapids discharge was 54.3 Kcfs, with a 20 Kcfs flow band in effect. On April 9, the average flow was 60.0 Kcfs; on April 10, average discharge was 83.5 Kcfs. On April 11, average discharge was 77 Kcfs. On April 12, average discharge was 139.2 Kcfs. On April 13, average discharge was 113.6 Kcfs, with a 30 Kcfs flow band in effect. On April 14, average discharge was 110.1 Kcfs, again with a 30 Kcfs flow band in effect.

On April 10, said Carlson, index seining found 271 fish, average length 41 mm. On April 13, field personnel sampled seven random sites, finding 32 fish, 29 of which were mortalities. On April 14, crews looked at six sites and found nine subyearling chinook mortalities. Carlson

noted that the reason Grant PUD was unable to stay within the flow band on April 13-14 was the very large and unexpected increase in flows that came down the river on those days.

Moving on to the second week's sampling, Carlson said field crews index seined on April 17; they sampled 318 fish, average fork length 42.9 mm. Field crews also randomly sampled 13 sites on April 20, finding a single mortality. They also sampled on April 18, 19 and 21, but found zero fish. However, flows had come up so much that most of the usual sampling areas were inundated. During this time, said Carlson, we were outside the flow bands because flows had gone up a whole lot more; even though we tried to flatten out the flows operationally as much as possible, we were unable to stay within the 30 Kcfs, 40 Kcfs and 60 Kcfs flow bands imposed last week. On April 19, Priest Rapids went to a 150 Kcfs flow minimum.

Anything you would have done differently? Paul Wagner asked. We have very limited ability to pond, Carlson replied; all we have down below are run-of-the-river dams, and given the very large fluctuations coming out of Chief Joseph last week, there really wasn't much we could do – one day, the estimate of Chief Joseph discharge was 77 Kcfs, and the actual we received was 139 Kcfs that day. We're always looking for additional ways to smooth flows out, he said.

Shane Scott asked that, in future reports, Carlson include information on the average, minimum and maximum size of the index-sampled fish; Carlson replied that he will include that data in future updates. In response to a question from Henriksen, Carlson said the end of emergence, based on degree-days since spawning, will take place later today or early tomorrow.

Will we be in the 150 Kcfs minimum operation for the next week? Wagner asked. As long as the five-day average exceeds 170 Kcfs, yes, Carlson replied – it looks as though, based on the forecasts we've seen, that meeting the 170 Kcfs average will not be a problem for the foreseeable future.

3. Historical Water Supply Forecast Error/Standard Deviation and Weather Update.

Harold Opitz went through the most recent weather and water supply forecast information, noting that little has changed since his last presentation; the May early-bird forecast is due out May 2, and it still looks as though, overall, the basin will experience near-normal to slightly-below-normal water supply conditions in 2002. He said the April final water supply forecast for the January through July period predicts slight decreases at Lower Granite (24.2 MAF, 81% of average), Grand Coulee (61.1 MAF, 97% of average) and The Dalles (96.4 MAF, 90% of average).

Opitz also provided a presentation on observed vs. forecast error and standard deviation for the period 1981-2001, explaining the method the River Forecast Center uses to compute standard error and deviation. Opitz noted that the largest uncertainty always occurs at the beginning of the runoff season; as the season progresses, the forecast always firms up. In response to a question from Henriksen, Opitz said the equations the RFC uses to calculate standard error have not been updated for some time; the RFC is currently in the process of updating them. Opitz added that he can provide copies of these calculations upon request.

4. 2002 Water Management Plan.

Henriksen said the 2002 Water Management Plan has not yet been finalized. She noted that Idaho has just submitted its comments, so the action agencies will determine how best to respond to the Idaho comments; the primary focus now I on the spring/summer update. Henriksen noted that IDFG's comments are available via the TMT homepage.

With respect to the spring/summer update, Henriksen said this document has been fleshed out considerably since the last TMT meeting, including the additional probability of refill bar charts requested at the last TMT meeting, and the incorporation of the April final water supply forecast. This document, too, is available via the TMT homepage. Henriksen asked the other TMT participants to review the spring/summer update prior to the next meeting of the group, and come to that meeting prepared to discuss any concerns they may have about the update. She added that there will be no formal written comment period on the spring/summer update, as there was on the 2002 Water Management Plan itself, so this will be the group's primary opportunity to comment on the update.

5. Current System Conditions.

The group discussed the ongoing McNary bridge removal work; the Corps noted that concrete-cutting started on Monday, and that, until that work is complete, project personnel have requested a change in the spill priority list, such that McNary receives a lower spill priority until the last bridge is removed on May 9. After the bridges are removed at McNary it can be higher on the list, but during construction it must avoid spill because of safety issues, said Henriksen. The bridge removal may be complete by May 9. At that time the TMT can revisit the position of McNary on the list. In response to a question, Rudd Turner said the Corps' recommendation is that Lower Granite be second to last on the spill priority, with McNary being last on the list.

A lengthy discussion ensued, with various participants expressing concern about the potential impact of the lack of spill at McNary (and the potential increase in spill at Lower Granite and John Day) on planned research at those projects. Wagner said NMFS' preference would be to move John Day down the spill priority list as well. Ultimately, the TMT agreed that the following spill priority list will be in effect until May 9: The Dalles, followed by Bonneville, Little Goose, Ice Harbor, John Day, Lower Granite and McNary. We can discuss this topic again at the May 8 TMT meeting, said Rudd Turner; in the meantime, we'll monitor the situation closely.

Henriksen went through the April final water supply forecasts for Grand Coulee, Lower Granite and The Dalles, reiterating that the Grand Coulee runoff volume is now predicted to be 97% of average; Lower Granite's, 81% of average; The Dalles', 90% of average. At Libby, the most recent forecast is 6.3 MAF, is 99% of average. At Hungry Horse, for the May-September period, the forecast is 105% of average.

Henriksen noted that the Corps has once again begun to produce a flow spreadsheet; this document is available via the TMT website by selecting "documents," then "operations," then "flow projections." The group spent a few minutes discussing this information, and the likely

shape of the 2002 runoff. Boyce expressed concern about the fact that flows came up following last week's rain events, and are now receding; do we have any options for maintaining the higher flows through the end of April? he asked. We're already drafting Grand Coulee at a rate of 1.5 feet per day, Tony Norris replied; that is the limitation on our ability to augment flows in the lower river. And when will Grand Coulee refill begin this year? Boyce asked. May 1 is the planning date, but that could vary depending on the weather, Henriksen replied.

Wagner noted that this is an opportune time to have a discussion about meeting the spring flow objectives. The group discussed various operational scenarios, including one under which Grand Coulee would continue to draft to meet the lower river flow objective until the freshet begins in earnest. That's really our only option for keeping flows up in the lower river, said Wagner; it would mean some delay in Grand Coulee refill, but there may be some opportunity to "round the corner," in terms of reducing the depth of the flood control draft at Grand Coulee, or at least moving some of that draft up earlier in the season.

The group discussed the tradeoffs inherent in this issue, which essentially boil down to flows now vs. flows later in the season. After a few minutes of debate, Henriksen said that, unless drastic changes occur in the weather or runoff situations, the action agencies will strategy will be to continue to operate Grand Coulee to maintain lower river flows past April 30, drafting the project up to 1.5 feet per day until the freshet begins. If there is an opportunity to round the corner later in the month, she said, we will gladly explore that.

With respect to current water quality conditions, Dick Cassidy said that, in general, there are no significant water quality problems to report; TDG levels everywhere in the system are within waiver limits, except at Bonneville, where TDG levels have exceeded 130% at times during spill testing.

Moving on to the current status of the fish migration, Wagner spent a few minutes going through the most recent passage index data. We're still not seeing huge numbers at Lower Granite, with 17,000 juveniles passing yesterday, Wagner said; we saw a good response to last week's flow increase, with indices of up to 80,000 one day; passage numbers have tailed off since then. The same pattern is holding true at the projects below Lower Granite, Wagner said. In general, he said, the juvenile migration is still at the lower end of the cumulative passage graph; however, juvenile passage is expected to peak in over the next two to three weeks. The group also discussed current adult information; Wagner noted that 2002 adult numbers are running well in excess of the 10-year average for this date, but are not as spectacular as the last two years of adult returns. It was noted that, in response to lower-than-forecast adult returns, the sport fishing season in the Columbia below Bonneville will end today. In general, said Wagner, there are substantial numbers of juvenile and migrants distributed throughout the Snake and Lower Columbia; the peak of the migration is expected to occur in the next two to three weeks.

6. Snake River Fish Operations After May 1.

Wagner said the goal of this agenda item is to take TMT input on a decision NMFS has already made; essentially, he said, this is a continuation of the discussion we had previously. We're still on track to go to 12-hour spill at Little Goose after May 1; we are no longer on track,

however, to go to full transportation at Lower Monumental after May 1. Basically, he said, in re-evaluating the transport survival data from Lower Monumental, there is too much variability in the historical data from that project to draw conclusions about the relative survival of in-river vs. transported fish. Wagner added that, given the lack of spill at Lower Monumental this year, there is an opportunity to greatly increase the knowledge in this area; what NMFS will likely propose is alternating days of collection and transport with days of full-flow bypass, although the details may be altered based on further discussion with the researchers. The goal is to collect enough fish to meet the study objectives, he said. Marvin Shuttles said his understanding is that five day blocks of collection/transport and full-flow bypass may be necessary for the Ice Harbor spillway survival test; Wagner reiterated that the details of the Lower Monumental operation still need to be worked out.

This is a bit of a problem, Henriksen said; essentially, the Corps will be responsible for the operation at Lower Monumental and at this time, the Corps still doesn't know what NMFS is requesting and how that will fit with all the other project needs, including research. This understanding must be reached soon because Lower Monumental is expecting to begin daily transport on May 1. Basically, said Wagner, we wanted to let the TMT know we're planning to operate Lower Monumental in a manner that is inconsistent with the BiOp, which says go to full transport at that project on May 1. We're hoping to work out the details of the Lower Monumental operation over the next few days, he said. After a few minutes of additional discussion, Shuttles said he will coordinate a conference call to finalize the Lower Monumental operations tomorrow afternoon; all interested TMT members are invited to join that call. We'll discuss this topic further at the next TMT meeting, Silverberg said.

7. Expected Sturgeon Operations in 2002.

David Wills distributed a final version of the sturgeon pulse SOR described at the TMT meeting two weeks ago; he said the electronic version will be posted to the Corps website later today. Wills said nothing has changed, in terms of the operations that were proposed at that meeting; this is simply a more formalized notification of the operation we desire, he said. Henriksen said the Corps understands the proposal and has incorporated the operating strategy into model runs. As the water supply varied, the Corps will explore actual implementation of the request.

8. New System Operational Requests.

On April 23, the action agencies received SOR 2002 C-3, on the subject of the operation of the Lower Columbia pools for the spring 2002 treaty fishery. This SOR, submitted by CRITFC, requests the following specific operations:

- Implement the following pool elevations as follows for the period 6 a.m. April 25 through 6 p.m. April 27:
- Bonneville Pool -- operate the pool within 1 foot from full pool (msl elevation 77-76)
- The Dalles (Celilo) Pool -- operate the pool within 1 foot (msl elevation 159.5-158.5)
- John Day Pool -- operate the pool within 1 foot (msl elevation 264.5-263.5)

Kyle Martin went briefly through the main points of this SOR, the full text of which is available via the TMT and FPC homepages. Please refer to this document for full details and justification. Martin noted that CRITFC is requesting that this operation be considered a hard constraint; he added that the Compact will be meeting again over the next few days and may decide to implement a further commercial fishing season.

The Corps plans to hold the Bonneville pool to a 1.5-foot operating range, 75-76.5 feet, Henriksen said; I do expect that to be a hard constraint. At John Day, a 1.5-foot range is also in effect; at The Dalles, we will request a somewhat steady operating range, but that pool will fluctuate somewhat based on flows and power demand.

9. Recommended Operations.

In general, said Henriksen, over the next two weeks, we plan to operate the system to meet the flow targets in the lower river. Please refer to the previous agenda items for further details of planned project operations over the next two weeks.

10. Next TMT Meeting Date.

The next meeting of the Technical Management Team was set for Wednesday, May 8. Meeting summary prepared by Jeff Kuechle, BPA contractor.

TMT ATTENDANCE LIST

APRIL 24, 2002

Name	Affiliation
Scott Bettin	BPA
Ron Boyce	ODFW
Chris Carlson	Grant PUD
Dick Cassidy	COE
Margaret Filardo	FPC
Jim Gaspard	B.C. Hydro
Russ George	Water Management Consultants Inc.
Terry Gruel	PP&L
Scott Hanson	BPA
Richelle Harding	D. Rohr & Associates
Robin Harkless	Facilitation Team
Tim Heizenrater	
Cindy Henriksen	COE

Jim Litchfield	Consultant (Montana)
Ningjen Liu	IdaCorp Energy
Kyle Martin	CRITFC
Kevin Nordt	PGE
Tony Norris	USBR
Mike O'Bryant	Columbia Basin Bulletin
Shane Scott	WDFW
Donna Silverberg	Facilitation Team
Mark Smith	COE
Rudd Turner	COE
Maria Van Houten	
Paul Wagner	NMFS
David Wills	USFWS